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EXAMINER	
CHOW, CHARLES CHIANG	
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Please find below and/or attached an Office communication concerning this application or proceeding.

9/3

Office Action Summary	Application No.	Applicant(s)
	09/693,938	SAMPATH ET AL.
	Examiner	**Art Unit**
	Charles Chow	2685

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on 27 August 2004.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *See Continuation Sheet* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3,4,6-19,21-23,25,27-32,34-36,39-45,47,48,50-61,63-65,67,69-73,75-77 and 79-83* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Continuation of Disposition of Claims: Claims pending in the application are 1,3,4,6-19,21-23,25,27-32,34-36,39-45,47,48,50-61,63-65,67,69-73,75-77 and 79-83.

Detailed Action
(for amendment received on 8/27/2004)

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1, 3-4, 6-7, 10-15, 18-19, 21-23, 25, 27-28, 31-32, 34-36, 39-45, 47-48, 50-51, 54-57, 60-61, 63-65, 67, 69, 72-73, 75-77 are rejected under 35 U.S.C. 103(a) as being unpatentable over Padovani et al. (US 6,222,830 B1) in view of Kusaki et al. (US 6,754,495).

Regarding **claim 1**, Padovani et al. (Padovani) teaches a frame selection system (Fig. 1, Fig.3, system comprising a base station BST 102 A-C) adapted to generate at least one enhanced frame (the channel processor 216 generates a quality frame 305 with FQM 308, frame quality metric information, as the enhanced frame, Fig. 3, col. 7, lines 47-67), generating at least one enhanced frame comprising at least one error burst representation (the generating of a frame from subscriber unit 100 with different rate with error representation information CRC appended to the frame, for sending to base transceiver station 102, col. 4, lines 25-67), the combining an acceptable portion of the enhanced frame with an acceptable portion of another enhanced frame based on the error burst representation to form a combined frame of a higher quality than the enhanced frame at least during a soft-handoff, the combing of

enhanced frames (A) (1-3) with error representation FQM with the enhanced frames (B)(1-3) based on the quality FQM, for soft handoff, to creating frame C (Fig. 5, col. 9, lines 19-40, abstract). Padovani fails to teach the generating of frame copy, although Padovani taught the generating of a enhanced frame. However, Kusaki et al. (Kusaki) teaches the duplicating, storing, of the received first packet frame and transmitting the first packet and duplicated packet frame to first base station and second base station for the handover purpose (the duplicating processing unit 660 in col. 13, lines 1-38; col. 14, lines 15-63; Kusaki's claim 4; col. 6, lines 6-29; col. 7, lines 45-67; col. 9, lines 9-38; col. 11, line 29 to col. 12, line 2), to select packet with lower error rate and discarding packet having worse error rate of the first and second packets (Kusaki's claim 2-3), the selecting, combining, the header information with lowest error rate (abstract), Kusaki teaches the frame synchronization having the duplicated frame transmitted at the specified transmission timing for reducing the handover interruption (abstract). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Padovani above with Kusaki's duplicated packet frames for handover, such that Padovani could combine a frame to a low error duplicated packet frame to produce a quality frame in order to reduce the interruption for soft handoff.

Regarding **claim 3**, Padovani teaches in claim 1 above for adapted to generate a primary enhanced frame (305) with frame quality control information 308 inserted into the frame.

Regarding **claim 4**, Padovani teaches in claim 1 above the generating of an enhanced frame with FQM, in combination with Eaton teaching in claim 1 for the generating an parallel frame by duplicating first information frame into a second information frame.

Regarding **claim 6**, Padovani teaches adapted to store each of the error burst representations within a respective frame (the base station storing the error burst representation FQM 308 into the frame 305, Fig. 3, abstract, col. 2, lines 51-64, for the respective frame F(A) (1) to F(B)(3) in Fig. 5).

Regarding **claim 7**, Padovani teaches the adapted to store each of the error burst representation with a respective frame quality indicator field (Fig. 5, the FQM for each respective frame F(A) (1) to F(B)(3), the M(A)(1) to M(A)(3), M(B)(1) to M(B)(3)).

Regarding **claim 10**, Padovani teaches the system comprising a wireless communications base station (the wireless communication base station in Fig. 1, col. 3, lines 29-32, col. 3, lines 41-42).

Regarding **claim 11**, Padovani teaches the error burst representations (FQM) are associated with a field or section of a respective frame (Fig. 5, the FQM for each respective frame F(A) (1) to F(B)(3), the M(A)(1) to M(A)(3), M(B)(1) to M(B)(3)).

Regarding **claim 12**, Padovani teaches adapted to evaluate a frame quality of the enhanced frame (a base station controller BSC 104 evaluates the FQM metric of enhanced frame 305 during the process for selecting a frame, abstract, col. 2, lines 63-64).

Regarding **claim 13**, Padovani teaches further adapted to analyze at least one error burst representation within the enhanced frame (a base station controller BSC analyze

the error burst representations, such as CRC, Yamamoto metric, FF-Ser, within the enhance frame abstract, col. 2, lines 63-64; col. 8, line 63 to col. 9, line 2).

Regarding **claim 14**, Padovani teaches the frame selection unit FSU (selector resource 500, Fig. 5; the selector 404, Fig. 4; col. 8, lines 32-54).

Regarding **claims 15, 28, 69,** Padovani teaches the accepting the enhanced frame if the frame quality (FQM) of the enhanced frame is above a threshold (the highest FQM quality value is the threshold for selecting the best frame, col. 8, lines 60 to col. 9, line 2). Padovani teaches the discarding the enhanced frame and requesting a replacement copy of the enhance frame if the frame quality of the enhanced frame is below the threshold (the selector element resource will determine which packet 305 has the highest FQM value, for continue processing the frame with highest FQM quality value, and discard other frames with lower quality, for a threshold of highest FQM metric value, as shown in col. 8, line 60 to col. 9, line 2).

Regarding **claim 18**, Padovani teaches the evaluated the frame quality of the enhanced frame based on a quality of a field or section of the enhanced frame (a base station controller BSC 104 evaluates the FQM metric of a frame 305, abstract, col. 2, lines 63-64, the Yamamoto metric, the re-encoded signal error rate SER, for a field or section of a frame in col. 1, line 64 to col. 2, line 44).

Regarding **claims 19, 61**, Padovani taught in claim 1 above for generating a combined frame (combined frame C in Fig. 5, col. 9, lines 26-34).

Regarding **claims 21, 34, 63, 76,** Padovani teaches the combining of the enhanced frames in claim 1, and Eaton taught in claim 1 above the adapted to combine an acceptable portion from a field or section of the enhanced frame and an acceptable

portion from a same field or section of the enhanced frame copy (the combine the first and second information frames, col. 18, lines 36-40, abstract).

Regarding **claims 22, 35, 64, 77,** Padovani teaches the combining of enhanced frames based on the quality metric in claim 1, and Eaton teaches the combining an acceptable portion from a field or section of an enhanced primary frame and an acceptable portion from a same field or section of an enhance parallel frame (the combine the first and second information frames, col. 18, lines 36-40, abstract, the same field to recover the missed paging messages).

Regarding **claims 23, 36, 65,** Padovani teaches the evaluating of a frame based on a quality of a field or section of the enhanced frame (a base station controller BSC 104 evaluates the FQM metric of enhance frame during the process for selecting a frame (abstract, col. 2, lines 63-64, in claim 1 above), and Eaton teaches the duplication of frame messages for frame message combining, in claim 1, such that the duplicated enhanced frame copy from Eaton could be evaluated by Padavani's BSC based on a quality of a field or section of the enhanced frame copy.

Regarding **claim 25**, Padovani teaches a device (base station controller BSC 104, abstract, col. 2, lines 63-64) analyze at least one error burst representation (FQM) within an enhanced frame [frame 305, the evaluating of the FQM for frames F(A) (1) to F(B)(3)], analyze at least one error burst representation within an second enhanced frame (the evaluation of the FQM for frames F(A) (1) to F(B)(3)]. Padovani teaches the combining an acceptable portion of the enhanced frame with an acceptable portion of the enhanced frame copy based on the error burst representations to from a combined frame of a higher quality than the enhanced frame [the combining frames

F(1)-F(3) with frames F(B)(1)-F(b)(3) with their associated FQM M(A)(1) to M(B)(3), to generate a higher quality new single frame C, having only F(A)(3), F(B)(2) and F(A)(1) in resultant frame, based on the selection of higher FQM metric values, Fig. 5, col. 9, lines 19-40]. Padovani fails to teach the frame copy, although Padovani taught the generating a enhanced frame. However Kusaki teaches the duplicating, storing, of the received first packet frame and transmitting the first packet and duplicated packet frame to first base station and second base station for the handover purpose (the duplicating processing unit 660 in col. 13, lines 1-38; col. 14, lines 15-63; Kusaki's claim 4; col. 6, lines 6-29; col. 7, lines 45-67; col. 9, lines 9-38; col. 11, line 29 to col. 12, line 2), to select packet with lower error rate and discarding packet having worse error rate of the first and second packets (Kusaki's claim 2-3), the selecting, combining, the header information with lowest error rate (abstract), Kusaki teaches the frame synchronization having the duplicated frame transmitted at the specified transmission timing for reducing the handover interruption (abstract). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Padovani above with Kusaki's duplicated packet frames for handover, such that Padovani could combine a frame to a low error duplicated packet frame to produce a quality frame in order to reduce the interruption for soft handoff.

Regarding **claim 27**, Padovani teaches the FSU (500, selector system 404 of BSC 104, Fig. 4; col. 8, lines 32-54).

Regarding **claim 31**, Padovani teaches a base station controller BSC 104 evaluates the FQM metric of enhance frame during the process for selecting a frame (abstract,

col. 2, lines 63-64, the quality of the field or section from the quality measurement of Yamamoto metric, SER in col. 1, line 64 to col. 2, line 44).

Regarding **claim 32**, Padovani teaches the generating of combined frame C (Fig. 5, col. 9, lines 28-34).

Regarding **claim 75,** Padovani taught in claim 1 above the adapted to combine an acceptable portion of an primary frame with an acceptable portion of an enhanced parallel frame.

Regarding **claim 45**, Padovani teaches a frame selection method (Fig. 5, Fig. 3, summary of invention) comprising generating at least one enhanced frame comprising at least one error burst representation, the generating of a frame from subscriber unit 100 with different rate with error representation information CRC appended to the frame, for sending to base transceiver station 102 (col. 4, lines 25-67), the combining an acceptable portion of the enhanced frame with an acceptable portion of another enhanced frame based on the error burst representation to form a combined frame of a higher quality than the enhanced frame at least during a soft-handoff, the combing of enhanced frames (A) (1-3) with error representation FQM with the enhanced frames (B)(1-3) based on the quality FQM, for soft handoff, to creating frame C (Fig. 5, col. 9, lines 19-40, abstract). Padovani fails to teach the generating of frame copy, although Padovani taught the generating of a enhanced frame. However, Kusaki et al. (Kusaki) teaches the duplicating, storing, of the received first packet frame and transmitting the first packet and duplicated packet frame to first base station and second base station for the handover purpose (the duplicating processing unit 660 in col. 13, lines 1-38; col. 14, lines 15-63; Kusaki's claim 4; col. 6, lines 6-29; col. 7,

lines 45-67; col. 9, lines 9-38; col. 11, line 29 to col. 12, line 2), to select packet with lower error rate and discarding packet having worse error rate of the first and second packets (Kusaki's claim 2-3), the selecting, combining, the header information with lowest error rate (abstract), Kusaki teaches the frame synchronization having the duplicated frame transmitted at the specified transmission timing for reducing the handover interruption (abstract). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Padovani above with Kusaki's duplicated packet frames for handover, such that Padovani could combine a frame to a low error duplicated packet frame to produce a quality frame in order to reduce the interruption for soft handoff.

Regarding **claim 47**, Padovani teaches in claim 1 above for adapted to generate a primary enhanced frame (305) with frame quality control information 308 inserted into the frame.

Regarding **claim 48**, Padovani teaches in claim 1 above the generating of an enhanced frame with FQM, in combination with Eaton teaching for the generating an parallel frame by duplicating all of the first frame message (col. 18, lines 51-53).

Regarding **claim 50**, Padovani teaches the storing of the error burst representation within a respective frame [the storing of each error burst representation FQM, Fig. 5, to each respective frame F(A) (1) to F(B)(3), the M(A)(1) to M(A)(3), M(B)(1) to M(B)(3)].

Regarding **claim 51**, Padovani teaches the storing each of the error burst representation (FQM) within a respective frame quality indicator field (Fig. 5, the

FQM for each respective frame F(A) (1) to F(B)(3) is stored at the position in that frame, having respective M(A)(1) to M(B)(3)).

Regarding **claim 54**, Padovani teaches a frame selection system of the BSC 104 based on the base station's quality metric inserted into FQM 308 (as shown above). Padovani discloses the error detection procedure to generate burst representation associated with a field or section of a frame (the given segment of data for CRC in col. 1, lines 55-57; the Yamamoto metric in col. 1 line 64 to col. 2, lines 18).

Regarding **claim 55**, Padovani teaches a base station controller BSC 104 evaluates the FQM metric of enhance frame during the process for selecting a frame (abstract, col. 2, lines 63-64).

Regarding **claim 56**, Padovani teaches a base station controller BSC analyze the error burst representation, CRC, Yamamoto metric, FF-Ser, within the enhance frame (abstract, col. 2, lines 63-64; col. 8, line 63 to col. 9, line 2).

Regarding **claim 57**, Padovani teaches the accepting the enhanced frame if the frame quality (FQM) of the enhanced frame is above a threshold (the highest FQM quality value is the threshold for selecting the best frame, col. 8, lines 60 to col. 9, line 2). Padovani teaches the discarding the enhanced frame and requesting a replacement copy of the enhance frame if the frame quality of the enhanced frame is below the threshold (the selector element resource will determine which packet 305 has the highest FQM value, for continue processing the frame with highest FQM quality value, and discard other frames with lower quality, for a threshold of highest FQM metric value, as shown in col. 8, line 60 to col. 9, line 2).

Regarding **claim 60**, Padovani teaches a base station controller BSC 104 evaluates the FQM metric of enhance frame during the process for selecting a frame (abstract, col. 2, lines 63-64).

Regarding **claim 67**, Padovani teaches a frame selection method (Fig. 5, Fig. 3, summary of invention) comprising generating at least one enhanced frame comprising at least one error burst representation, the generating of a frame from subscriber unit 100 with different rate with error representation information CRC appended to the frame, for sending to base transceiver station 102 (col. 4, lines 25-67), the combining an acceptable portion of the enhanced frame with an acceptable portion of another enhanced frame based on the error burst representation to form a combined frame of a higher quality than the enhanced frame at least during a soft-handoff, the combing of enhanced frames (A) (1-3) with error representation FQM with the enhanced frames (B)(1-3) based on the quality FQM, for soft handoff, to creating frame C (Fig. 5, col. 9, lines 19-40, abstract). Padovani fails to teach the generating of frame copy, although Padovani taught the generating of a enhanced frame. However, Kusaki et al. (Kusaki) teaches the duplicating, storing, of the received first packet frame and transmitting the first packet and duplicated packet frame to first base station and second base station for the handover purpose (the duplicating processing unit 660 in col. 13, lines 1-38; col. 14, lines 15-63; Kusaki's claim 4; col. 6, lines 6-29; col. 7, lines 45-67; col. 9, lines 9-38; col. 11, line 29 to col. 12, line 2), to select packet with lower error rate and discarding packet having worse error rate of the first and second packets (Kusaki's claim 2-3), the selecting, combining, the header information with lowest error rate (abstract), Kusaki teaches the frame synchronization having the

duplicated frame transmitted at the specified transmission timing for reducing the handover interruption (abstract). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Padovani above with Kusaki's duplicated packet frames for handover, such that Padovani could combine a frame to a low error duplicated packet frame to produce a quality frame in order to reduce the interruption for soft handoff.

Regarding **claim 72**, Padovani teaches a base station controller BSC 104 evaluates the FQM metric of enhance frame during the process for selecting a frame (abstract, col. 2, lines 63-64).

Regarding **claim 73**, Padovani teaches the generating of a combined frame C (Fig. 5, col. 9, lines 28-34).

3. Claims 8-9, 52-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Padovani in view of Kusaki, and further in view of Strawczynski.

Regarding **claim 8**, Padovani and Kusaki fail to teach the error burst representation comprising error start indicator and error length indicator. However, Strawczynski teaches the combining of an acceptable portion of an enhanced frame comprising at least one error burst representation that include an error start indicator and error length indicator with an acceptable portion of an enhanced frame based on an error burst representation within each frame to form a combined frame of a higher quality than the enhanced frame at least during a soft-handoff, the combining of frame A from base station transceiver BTS A with the frame B from BTS A, with the error burst 1-2 representation indicated at different bit positions for frame A, frame B, with

error length marked with "x" in Fig. 6a-6b (Fig. 6c-6d; col. 6, line 7 to col. 7, line 37), for the soft handoff (col. 2, lines 50-52), for the combining enhanced frame with error burst for soft handoff, with error position, error length indication. Strawczynski fail to teach the frame copy, although Strawczyski taught the enhanced frame with error Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Padovani, Kusaki, with Strawczynski's error position, length indication, such that the error in the frame could be quickly located, by checking the marked "x".

Regarding **claims 9, 53**, Strawczynski teaches in Fig. 6b-6c, the binary code marked with "x", for the error start indication and error length indication.

Regarding **claim 52**, Strawczynski teaches in Fig. 6b-6c, the each error burst representation including the error start indicator and an error length indication as shown with "x".

4. Claims 16, 29, 58, 70 are rejected under 35 U.S.C. 103(a) as being unpatentable over Padovani in view of Kusaki, and further in view of Hendrickson et al. (US 5,974,584).

Regarding **claim 16**, Padovani and Kusaki fail to teach the threshold is associated with the error burst length. However, Hendrickson et al. (Hendrickson) teaches the second predetermined threshold of the number of errors (error length) in a frame which is used to accept the frame for constructing the output signal, and none of the data portion of the subsequent frame are used until parity error is less than a second threshold (col. 10, lines 9-15; col. 11, lines 11-16). Hendrickson teaches an improved

efficient of error controlling for discarding received data information when the received frame contains more than a threshold number of erroneous segments (abstract). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Padovane, Kusaki, with Hendrickson's threshold for number of erroneous segment in a frame, such that system could efficiently controlling the received frame based upon the threshold for number of error in the frame.

Regarding **claim 29**, Hendrickson taught in claim 16 for the threshold is associated with the error burst length.

Regarding **claim 58**, Hendrickson above in claim 16 for the threshold is associated with the error burst length.

Regarding **claim 70**, Hendrickson above in claim 16 for the threshold is associated with the error burst length.

5. Claims 17, 30, 59, 71 are rejected under 35 U.S.C. 103(a) as being unpatentable over Padovani in view of Kusaki, and further in view of Neumiller et al. (US 6,226,283 B1).

Regarding **claim 17**, Padovani and Kusaki fail to teach the adjustable threshold, although Padovani has taught the error burst length of the CRC, the Yamamoto metric associated for a error location. However, Neumiller et al. (Neumiller) teaches the frame quality indicator FQI which can be dynamically adjusted to be the adjustable threshold for the forward error correction FEC (col. 4, lines 1-34). Neumiller teaches the efficient frame selection and routing based on the FQI, having the adjustable

threshold for the FQI, such that frame selection can be flexibly selected based on the configurable threshold for the particular situation. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Padovane, Kusaki with Neumiller's adjustable threshold for the FQI, such that system could efficiently select and route the frame to the target base station.

Regarding **claim 30**, Neumiller taught in claim 17 above for the adjustable threshold, associated with the error length and error location.

Regarding **claim 59**, Neumiller taught in claim 17 above for the adjustable threshold, associated with the error length and error location.

Regarding **claim 71**, Neumiller taught in claim 17 above for the adjustable threshold, associated with the error length and error location.

6. Claims 39-44, 79-83 are rejected under 35 U.S.C. 103(a) as being unpatentable over Strawczynski in view of Kusaki, and further in view of Padovani.

Regarding **claim 39**, Strasczynski et al. (Strawczynski) teaches a device to combine an acceptable portion of an enhanced frame comprising at least one error burst representation that include an error start indicator and error length indicator with an acceptable portion of an enhanced frame based on an error burst representation within each frame to form a combined frame of a higher quality than the enhanced frame at least during a soft-handoff, the combining of frame A from base station transceiver BTS A with the frame B from BTS A, with the error burst 1-2 representation indicated at different bit positions for frame A, frame B, with error length marked with "x" in Fig. 6a-6b (Fig. 6c-6d; col. 6, line 7 to col. 7, line 37), for

the soft handoff (col. 2, lines 50-52), for the combining enhanced frame with error burst for soft handoff, with error position, error length indication. Strawczynski fail to teach the frame copy, although Strawczyski taught the enhanced frame with error burst. However, Kusaki teaches the duplicating, storing, of the received first packet frame and transmitting the first packet and duplicated packet frame to first base station and second base station for the handover purpose (Kusaki's claim 4), to select packet with lower error rate and discarding packet having worse error rate of the first and second packets (Kusaki's claim 2-3), the selecting, combining, the header information with lowest error rate (abstract), Kusaki teaches the frame synchronization having the duplicated frame transmitted at the specified transmission timing for reducing the handover interruption (abstract). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Strawczynski above with Kusaki's duplicated packet frames for handover, such that a frame could be combined with a low error duplicated packet frame to produce a quality frame in order to reduce the interruption for soft handoff.

Regarding **claim 40**, Strawcynski taught in claim 39 above the adapted to combine an acceptable portion of an primary frame with an acceptable portion of an enhanced parallel frame (Fig. 6a-6d).

Regarding **claim 41,** Padovani teaches the combining of the enhanced frames in claim 1, and Eaton taught in claim 1 above the adapted to combine an acceptable portion from a field or section of the enhanced frame and an acceptable portion from a same field or section of the enhanced frame copy (the combine the first and second information frames, col. 18, lines 36-40, abstract).

Regarding **claim 42,** Padovani teaches the combining of enhanced frames based on the quality metric in claim 1, and Eaton teaches the combining an acceptable portion from a field or section of an enhanced primary frame and an acceptable portion from a same field or section of an enhance parallel frame (the combine the first and second information frames, col. 18, lines 36-40, abstract, the same field to recover the missed paging messages).

Regarding **claim 43,** Padovani teaches the evaluating of a frame based on a quality of a field or section of the enhanced frame (a base station controller BSC 104 evaluates the FQM metric of enhance frame during the process for selecting a frame (abstract, col. 2, lines 63-64, in claim 1 above), and Eaton teaches the duplication of frame messages for frame message combining, in claim 1, such that the duplicated enhanced frame copy from Eaton could be evaluated by Padavani's BSC based on a quality of a field or section of the enhanced frame copy.

Regarding **claim 44**, Strawcynski teaches the FSU (the radio connector controller 104, to form new frame C using frame A and frame B, col. 6, lines 22-27).

Regarding **claim 79,** Strawczynski teaches a method (Fig. 6a-6d) to combine an acceptable portion of an enhanced frame comprising at least one error burst representation that include an error start indicator and error length indicator with an acceptable portion of an enhanced frame based on an error burst representation within each frame to form a combined frame of a higher quality than the enhanced frame at least during a soft-handoff, the combining of frame A from base station transceiver BTS A with the frame B from BTS A, with the error burst 1-2 representation indicated at different bit positions for frame A, frame B, with error length marked

with "x" in Fig. 6a-6b (Fig. 6c-6d; col. 6, line 7 to col. 7, line 37), for the soft hanfoff (col. 2, lines 50-52), for the combining enhanced frame with error burst for soft handoff, with error position, error length indication. Strawczynski fail to teach the frame copy, although Strawczyski taught the enhanced frame with error burst. However, Kusaki teaches the duplicating, storing, of the received first packet frame and transmitting the first packet and duplicated packet frame to first base station and second base station for the handover purpose (Kusaki's claim 4), to select packet with lower error rate and discarding packet having worse error rate of the first and second packets (Kusaki's claim 2-3), the selecting, combining, the header information with lowest error rate (abstract), Kusaki teaches the frame synchronization having the duplicated frame transmitted at the specified transmission timing for reducing the handover interruption (abstract). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Strawczynski above with Kusaki's duplicated packet frames for handover, such that a frame could be combined with a low error duplicated packet frame to produce a quality frame in order to reduce the interruption for soft handoff.

Regarding **claim 80**, Padovani taught in claim 1 above the adapted to combine an acceptable portion of an primary frame with an acceptable portion of an enhanced parallel frame.

Regarding **claim 81**, Padovani teaches the combining of the enhanced frames in claim 1, and Eaton taught in claim 1 above the adapted to combine an acceptable portion from a field or section of the enhanced frame and an acceptable portion from a same

field or section of the enhanced frame copy (the combine the first and second information frames, col. 18, lines 36-40, abstract).

Regarding **claim 82**, Padovani teaches the combining of enhanced frames based on the quality metric in claim 1, and Eaton teaches the combining an acceptable portion from a field or section of an enhanced primary frame and an acceptable portion from a same field or section of an enhance parallel frame (the combine the first and second information frames, col. 18, lines 36-40, abstract, the same field to recover the missed paging messages).

Regarding **claim 83**, Strawcynski teaches the evaluating a frame quality of the enhanced frame based on a quality of a field or section of a enhanced frame (the error bit marked with "x" in Fig. 6b-6c; different logic operations to create frame in col. 6, lines 28-36; the checking of the CRC in frames I1, I2, col. 6, lines 37-46), evaluating a frame quality of another enhanced frame (frame from BTS A or BTS B) based on the quality of the field or section (error burst marked with "x") of the enhanced frame. Kusaki teaches the frame copy as shown in claim 1 above.

Response to Argument

7. Applicant's arguments with respect to claims 1, 3-4, 6-19, 21-23, 25, 27-32, 34-36, 39-45, 47-48, 50-61, 63-65, 67, 69-73, 75-77, 79-83 have been considered but are moot in view of the new ground(s) of rejection.

Regarding applicant's amendment for no teachings from Padovani -830 B1 for the <u>generating of a enhanced frame with error burst representation</u>; Eaton -'645 does not teach the <u>motivation for soft handoff to combining</u> with Padovani; the <u>error burst</u>

representation including error start indicator and error length indicator (page 18, applicant's remark), for the combining of enhanced frame with enhanced frame copy. The ground of rejection has been changed by utilizing Kusaki et al. (US 6,754,495) and Strawczynski et al. (US 6,381,232 B1).

Regarding generating a enhanced frame with error burst representation, Padovani does teach the generating a enhanced frame with error burst representation, CRC data, the subscriber unit 100 generating frame using different rates with quality indication information CRC appended to the frame, for sending to base transceiver station 102 (col. 4, lines 25-67).

Regarding generating combining acceptable portion of the enhanced frame with acceptable frame from a second frame based on the error burst representation to form the combined frame of a higher quality than the enhanced frame during soft-handoff, Padovani teaches the combing of enhanced frames (A) (1-3) with error representation FQM with the enhanced frames (B)(1-3) based on the quality FQM, for soft handoff, to creating frame C (Fig. 5, col. 9, lines 19-40, abstract).

Regarding generating a frame copy for handoff purpose, Kusaki et al. teaches the duplicating, generating, storing, the first packet and transmitting the first packet and duplicated packet to first base station and second base station for the handover purpose (the duplicating processing unit 660 in col. 13, lines 1-38; col. 14, lines 15-63; Kusaki's claim 4; col. 6, lines 6-29; col. 7, lines 45-67; col. 9, lines 9-38; col. 11, line 29 to col. 12, line 2), to select packet with lower error rate and discarding packet having worse error rate of the first and second packets (Kusaki's claim 2-3), the selecting, combining, the header information with lowest error rate (abstract), such

that Padovani could combine enhanced frame with FQM to a duplicated packet frame, based on the evaluation of error rate for soft handoff.

Regarding the error burst representation including error start indicator and error length indicator, Strawczynski et al. teaches the combining of frame A from base station transceiver BTS A with the frame B from BTS A, with the error burst 1-2, located at different bit position with error length marked with "x" (Fig. 6a-6d; col. 6, line 7 to col. 7, line 37), for the soft hanfoff (col. 2, lines 50-52).

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles Chow whose telephone number is (703)-306-5615. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban, can be reached at (703)-305-4385.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to: (703) 872-9306 (for Technology Center 2600 only).

Hand-delivered responses should be brought to 220 20th Street, Crystal Plaza two, Lobby, Room 1B03, Arlington, VA 22202 (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Charles Chow C.C.

October 15, 2004.

EDWARD F. URBAN
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